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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,400	01/10/2002	Keith M. Murr	17708	4638

7590

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EXAMINER

NGUYEN, PHUONGCHI T

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/043,400

Applicant(s)

MURR ET AL.

Examiner

Phuongchi T Nguyen

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 9, 10, 19 and 20 is/are rejected.
- 7) ☒ Claim(s) 2-8 and 11-18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 9-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9, lines 12-14, it is unclear where is "a resilient spacer positioned between said substrate and said housing"? Based on the disclosure, instead of a resilient spacer 70 positioned between said substrate 160 and said housing 4; a resilient spacer 70 positioned between said substrate/housing 4 and said chip 150 as shown in figure 2 and 12. Appropriate correction is required.

Claim Objections

2. Claims 3-8 are objected to because of the following informalities:

Claim 3, line 2, "said marginal side walls" lacks proper antecedence basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over McHugh et al (US6179624B1-herein after referred as McHugh'624) in view of McHugh et al (US6244875B1-herein after referred as McHugh'875).

In regard to claim 1, McHugh'624 discloses (figure 8) a socket for interconnecting a chip (7) to a substrate (9), where the chip (7) includes pads (77) thereon and the substrate (9) includes leads (56) extending upwardly therefrom and are profiled to contact the pads (77), the socket comprising a housing (6) having an upper chip receiving face (upper face of 6), a lower substrate receiving face (lower face of 6), and a plurality of longitudinally extending slots (602) extending between the upper chip receiving face (upper face of 6) and the lower substrate receiving face (lower face of 6), the socket including at least one arm (621) (figure 2) extending downwardly therefrom for contacting the substrate (9). McHugh'624 discloses the invention but lacks at least one resilient arm extending downwardly therefrom for contacting the substrate. However, McHugh'875 teaches the socket comprising at least one resilient arm (27) extending downwardly therefrom for contacting the substrate (14) (figures 2, 8, and Column 4, lines 23-27). It would have been obvious to one having ordinary skill at the time the invention was made to modify the socket of McHugh'624 by providing at least resilient arm extending downwardly therefrom for contact the substrate as taught by McHugh'875 for increasing the connection between the housing and the substrate.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over McHugh et al (US6179624B1-herein after referred as McHugh'624) in view of Newell (US4831359).

In regard to claim 9, further limit from claim 1, McHugh disclose the invention, but lacks a resilient spacer position between the housing/substrate and the chip housing. However, Newell teaches a resilient spacer (42) positioned between the substrate (28) and the member (44) (figure 2 and column 3, lines 34-40). It would have been obvious to one having ordinary skill at the time the invention was made to modify the socket of McHugh by providing the deformable spacer

between the two housings/substrates of Newell for having a distance to prevent the leads over compression from engaging with the pads on the chip housing.

6. Claims 10 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McHugh et al (US6179624B1-herein after referred as McHugh'624) in view of Newell (US4831359), applied as claim 9 above, and further in view of McHugh et al (US6244875B1-herein after referred as McHugh'875).

Claim 10 is rejected for the same reason of claim 1 of the resilient arm.

In regard to claim 19, McHugh'624 discloses (figures 1-2) the socket further wherein the housing (6) includes marginal side walls and marginal end walls (four walls of 61), and the upper chip receiving face (upper face of 6) is defined by a recess (63) into the housing (6) defining inner peripheral edges (inside walls forming by recess 63) in the marginal side walls and marginal end walls (four walls of 61).

In regard to claim 20, McHugh'624 discloses (figures 1-2) the socket further comprising locating members (inner peripheral edges forming a recess 63) positioned adjacent the recess (63) for positioning the chip (7) in the housing (6) in juxtaposition (side by side) with the leads (56). Since the locating member and the inner peripheral edges of claim 19 are carrying the same function, therefore, they are labeled by the same elements.

Allowable Subject Matter

7. Claims 2-8 and 11-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

In regard to claims 2 and 11, the prior fails to teach or suggest the socket wherein the longitudinally extending slots being formed by ribs extending between the end walls of the housing.

In regard to claims 3 and 12, the prior fails to teach or suggest the socket wherein the at least one arm extends from one of marginal side walls.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchi T Nguyen whose telephone number is (703)305-0729. The examiner can normally be reached on Monday through Thursday from 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (703) 308 - 2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7723 for regular communications and (703) 305-7723 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

March 31, 2003


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